

REMARKS

Please reconsider the application in view of the following remarks. Applicant thanks the Examiner for carefully considering this application.

Disposition of Claims

Claims 1-13 are pending in this application. Claims 1, 6, 12, and 13 are independent. The remaining claims depend, directly or indirectly, from claims 1 and 6.

Rejection(s) under 35 U.S.C § 103

Claims 1, 2, and 4 stand rejected under 35 U.S.C. § 103(a) as unpatentable over “The LDUP Replication Update Protocol,” Stokes, et al. (“Stokes”) and U.S. Patent No. 6,272,536 (“van Hoff”). This rejection is respectfully traversed.

The present invention involves the use of Replica Update Vectors (RUV) in a directory server. A replica is a locally-held copy of a portion of a directory information tree (DIT). Specifically, the RUV is used to determine the minimal set of updates to bring a consumer up to date with respect to a supplier. Claim 1 recites a directory server with a consumer server and a supplier server that exchange data. Specifically, claim 1 recites the use of pluggable services to manage replication of data from the supplier server to the consumer server. Further, the RUV is used to determine the minimal set of updates necessary to synchronize the consumer server with respect to the supplier server.

With respect to the rejection of claim 1, the Examiner admits that Stokes does not disclose or suggest pluggable services or the determination of a minimal set of updates required to update the consumer server with respect to the supplier server, as recited in

independent claim 1 of the present application. However, the Examiner asserts that van Hoff discloses pluggable services and the determining of a minimal set of updates.

In contrast to the present invention, Van Hoff relates to distributing software applications and data to clients such that automatic software updates are installed on the client system. Van Hoff discloses a method of automatically downloading and updating client software from a server such that an end-user is not required to manually install software updates. Thus, van Hoff significantly differs from the present invention because the present invention compares information exchanged between two servers (*i.e.*, the consumer server and the supplier server) to ensure that both servers have the same updated information regarding a specific portion of a directory information tree. Further, the pluggable services referenced by the Examiner in van Hoff (col. 10, ll. 62-65) relate to a plug-in module that is used to obtain a server channel index. The channel index is subsequently used to identify a specific application associated with the update request. Therefore, the plug-in module disclosed in van Hoff is not used to manage replication of data, as recited in independent claim 1.

Further, van Hoff does not disclose or suggest determining a minimal set of updates as asserted by the Examiner. Rather, van Hoff discloses reducing the size of a request for an update. Specifically, van Hoff discloses an optimized update request that is obtained by replacing the channel index by a checksum of the channel index, which enables the *update request to become smaller in size* (col. 8, ll. 35-38). This is significantly different than determining a minimal number of updates that are necessary to bring a consumer server up-to-date with respect to a supplier server, as recited in independent claim 1.

In view of the above, Stokes and van Hoff, whether considered separately or in combination, do not render the present invention, as recited in claim 1, obvious. Thus, claim 1 is patentable over Stokes and van Hoff. Dependent claims 2-5 are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

Claims 6, 7, 10, 12, and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Stokes and U.S. Patent No. 6,098,078 ("Gehani"). With respect to the rejection of claims 6 and 13, the Examiner admits that Stokes fails to disclose or suggest "requesting a replica update vector," "comparing the replicate update vector," and "sending discrepancies of a comparison." However, the Examiner asserts that Gehani discloses these limitations as recited in independent claims 6 and 13. Specifically, the Examiner asserts that Gehani discloses "requesting a replica update vector" (with reference to col. 14, ll. 11-14 of Gehani).

In contrast to the present invention, Gehani discloses that an *out-of-bound request* is received. An out-of-bound request represents data items obtained by *direct copying*, outside the normal update propagation procedure of Gehani (col. 14, ll. 7-10). Specifically, an update vector contains the state of a replica of information in a directory server with respect to other replicas. The update vector is used to compare the information between two servers and update the information so that both servers have the same information. Therefore, the out-of-bound request disclosed in Gehani cannot specifically be a request for an *update vector* because the request is for data directly copied from a server and not a request to update information relative to information contained in another server.

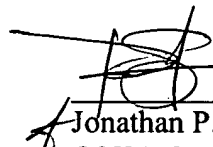
In view of the above, Stokes and Gehani, whether considered separately or in combination, do not disclose or suggest each and every element of independent claims 6 and 13. Therefore, independent claims 6 and 13 are patentable over Stokes and Gehani. Further, independent claim 12 includes similar subject matter (*i.e.*, "requesting a replica update vector") and is patentable over Stokes and Gehani for the same reasons noted above. Dependent claims 7-11 are patentable for at least the same reasons.

Conclusion

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 13220.013001; P5848).

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Respectfully submitted,


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